

Title (en)  
LAYERED DOUBLE HYDROXIDE CAPABLE OF ADSORBING UNSATURATED FATTY ACIDS SELECTIVELY, AND COSMETIC PRODUCED USING SAID LAYERED DOUBLE HYDROXIDE

Title (de)  
GESCHICHTETES DOPPELHYDROXID ZUR SELEKTIVEN ADSORPTION UNGESÄTTIGTER FETTSÄUREN SOWIE UNTER VERWENDUNG DES GESCHICHTETEN DOPPELHYDROXIDS HERGESTELLTES KOSMETIKUM

Title (fr)  
HYDROXYDE DOUBLE EN COUCHES CAPABLE D'ABSORBER SÉLECTIVEMENT LES ACIDES GRAS INSATURÉS ET COSMÉTIQUE PRODUIT EN UTILISANT LEDIT HYDROXYDE DOUBLE EN COUCHES

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Application  
**EP 14798638 A 20140411**

Priority  
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Abstract (en)  
[origin: EP2998274A1] [Object] A layered double hydroxide which has selective adsorbability to unsaturated fatty acids and can have a neutral pH value (i.e., a weakly acidic to weakly alkaline pH value) upon being dispersed in water and a cosmetic produced using the layered double hydroxide have been demanded. [Solution] The layered double hydroxide according to the present invention is characterized by comprising base layers each comprising a metal double hydroxide represented by the formula:  $M(II)_1-XM(III)_x(OH)_2$  (wherein M(II) represents one or two bivalent metal atoms; M(III) represents a trivalent metal atom; and x represents 0.2 to 0.33), and an intermediate layer and interlayer water each intercalated between the base layers, wherein the intermediate layer comprises a compound represented by the formula: R1-COOH or R2-SO<sub>3</sub>H (wherein R1 and R2 independently represent at least one substituent selected from an aliphatic hydrocarbon group, a substituted aliphatic hydrocarbon group, an aromatic hydrocarbon group, a substituted aromatic hydrocarbon group, a heterocyclic group and a substituted heterocyclic group).

IPC 8 full level  
**A61K 8/19** (2006.01); **A61K 8/26** (2006.01); **A61K 8/27** (2006.01); **A61Q 1/12** (2006.01); **C01F 7/785** (2022.01); **C01G 9/00** (2006.01)

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Citation (search report)  
• [X] US 2008021115 A1 20080124 - IKEMATSU DAISAKU [JP], et al  
• [X] WO 2012081135 A1 20120621 - OREAL [FR], et al  
• [X] WO 2012101222 A1 20120802 - ILIOS SRL [IT], et al  
• [X] JP 2004189671 A 20040708 - NARITA EIICHI, et al  
• [X] US 5474762 A 19951212 - CARR STUART W [GB], et al  
• [X] HWANG S-H ET AL: "INTERCALATION OF FUNCTIONAL ORGANIC MOLECULES WITH PHARMACEUTICAL, COSMECEUTICAL AND NUTRACEUTICAL FUNCTIONS INTO LAYERED DOUBLE HYDROXIDES AND ZINC BASIC SALTS", BULLETIN OF THE KOREAN CHEMICAL SOCIETY, KOREAN CHEMICAL SOCIETY, KR, vol. 22, no. 9, 1 January 2001 (2001-01-01), pages 1019 - 1022, XP009035659, ISSN: 0253-2964  
• [X] PERIOLI L ET AL: "Use of anionic clays for photoprotection and sunscreen photostability: Hydrotalcites and phenylbenzimidazole sulfonic acid", JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, PERGAMON PRESS, LONDON, GB, vol. 67, no. 5-6, 1 May 2006 (2006-05-01), pages 1079 - 1083, XP028048639, ISSN: 0022-3697, [retrieved on 20060501], DOI: 10.1016/J.JPCS.2006.01.029  
• See references of WO 2014185201A1

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